

**REGIONAL COOPERATION IN STORMWATER MANAGEMENT**

**FISCAL YEAR 2019-2020**

**A STATUS REPORT**

**This report was included in the HRPDC Work Program for FY 2019-2020, approved by the Commission at its Executive Committee Meeting on May 16, 2019**

**Prepared by the staff of the  
Hampton Roads Planning District Commission  
in cooperation with the  
Regional Stormwater Workgroup**

**September 2020**

## **REPORT DOCUMENTATION**

### **TITLE**

**Regional Cooperation in Stormwater  
Management Fiscal Year 2019-2020:  
A Status Report**

### **REPORT DATE**

**September 2020**

### **GRANT/SPONSORING AGENCY**

**LOCAL FUNDS**

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### **ABSTRACT**

This document describes cooperative activities related to stormwater management undertaken by Hampton Roads local governments during Fiscal Year 2019-2020. The activities described include the regional information exchange process, public information and education, legislative and regulatory issues, cooperative regional studies and related programs. This document is used by the region's eleven localities with stormwater permits to assist them in meeting their permit requirements.

### **ACKNOWLEDGMENTS**

The Hampton Roads Planning District Commission, in cooperation with the Regional Stormwater Workgroup, prepared this report.

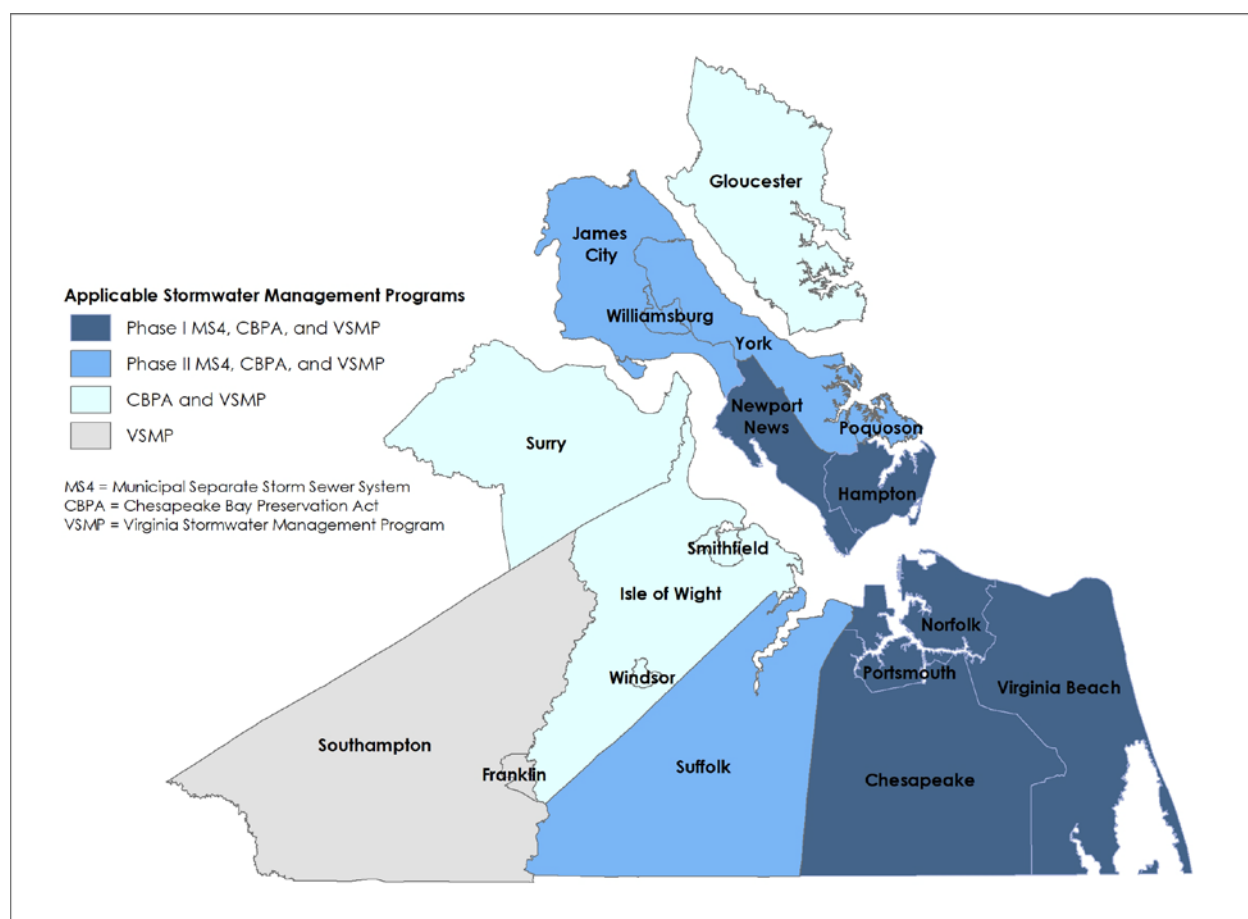
Preparation of this report was included in the HRPDC Unified Planning Work Program for FY 2019-2020, approved by the Commission at its Executive Committee Meeting of May 16, 2019.

The seventeen-member local governments through the HRPDC Regional Stormwater Management Program provided funding.

## INTRODUCTION

Working through the Hampton Roads Planning District Commission (HRPDC), the region's seventeen-member cities, counties, and town (Figure 1) cooperated on a variety of stormwater management activities during Fiscal Year 2019-2020. This cooperative effort has been underway as a formal adjunct to the Virginia Pollutant Discharge Elimination System Permits (VPDES) for Municipal Separate Storm Sewer Systems (MS4) held by the Cities of Chesapeake, Hampton, Newport News, Norfolk, Portsmouth and Virginia Beach since Fiscal Year 1995-1996. The Cities of Suffolk, Poquoson, Williamsburg, and the Counties of James City County, Isle of Wight, and York joined in 2002 to coordinate Phase II MS4 permit applications. Cooperative activities documented in this report represent a continuation of an ongoing effort, which has involved concerted activity since 1992.

As of April 19, 2016, the Phase II MS4 permit for Isle of Wight County was terminated by the Department of Environmental Quality (DEQ). It was determined that the County does not own or operate a MS4 within the Census Urbanized Area.



**Figure 1**

## REGIONAL STORMWATER MANAGEMENT PROGRAM GOALS

The HRPDC and local stormwater staffs undertook a comprehensive effort in FY 1998-1999, called the Regional Loading Study. The project included developing a set of regional stormwater management goals to guide the regional program. The goals were presented to and adopted by the HRPDC at its Executive Committee Meeting in September 1999. They were reaffirmed in the January 2003 approval of the “Memorandum of Agreement (MOA) Establishing the Hampton Roads Regional Stormwater Management Program” and the renewal of the MOA in 2008, 2013, and 2018. The adopted Regional Stormwater Management Program Goals, which guide the regional program, are:

- Manage stormwater quantity and quality to the maximum extent practicable (MEP).
  - Implement best management practices (BMPs) and retrofit flood control projects to provide water quality benefits.
  - Support site planning and plan review activities.
  - Manage pesticide, herbicide and fertilizer applications.
- Implement public information activities to increase citizen awareness and support for the program.
- Meet the following needs of citizens:
  - Address flooding and drainage problems.
  - Maintain the stormwater infrastructure.
  - Protect waterways.
  - Provide the appropriate funding for the program.
- Implement cost-effective and flexible program components.
- Satisfy VPDES stormwater permit requirements.
  - Enhance erosion and sedimentation control.
  - Manage illicit discharges, spill response, and remediation.

## THE REGIONAL PROGRAM

The Regional Stormwater Management Program initially focused on activities that supported the permit compliance efforts of the six communities with Phase I VPDES MS4 Permits, technical assistance to the region’s non-permitted communities and regional education and training to support all of the communities. The program has expanded to include the needs of the five communities with Phase II VPDES MS4 permits and the development of locally administered Stormwater Programs which were required starting July 1, 2014.

### **COVID-19**

Beginning in March 2020 and continuing into FY 2021, the Hampton Roads localities are experiencing the impacts of the COVID-19 pandemic. Local staff have adapted their operations to protect the health of their employees and their communities while continuing to provide services and meet regulatory requirements. The Regional Stormwater Management Program has also been impacted, most notably by HRPDC staff hosting regular meetings of the Regional Stormwater Workgroup and the Regional Environmental Committee, using virtual platforms rather than meeting in person. During such unprecedented times, sharing new information, resources, and lessons learned is particularly valuable.

### ***Phase I MS4 Permittees***

The current Phase I MS4 permits became effective on July 1, 2016. FY 2020 represents the fourth year of the five-year permit cycle. In addition to implementing their Chesapeake Bay TMDL Action Plans, this year, the Phase I permittees were focused on the following: 1) implementing Stormwater Pollution Prevention Plans (SWPPPs) for high priority municipal facilities and 2) continuing the Best Management Practice (BMP) effectiveness monitoring programs.

### ***Phase II MS4 Permittees***

The Phase II General Permit was reissued on November 1, 2018. FY 2020 represents the second year in the permit cycle. The Phase II permittees submitted updated Chesapeake Bay TMDL Action Plans that reflect 40% of the required pollutant reductions. Permittees also prepared TMDL Action Plans for all of the local TMDLs that were approved by the USEPA prior to July 1, 2013 for which they have an assigned waste load allocation.

Both the Phase I and Phase II Localities continue to implement their local Stormwater Programs, train staff on stormwater issues, and meet education and outreach requirements. HRPDC staff provided information and coordinated trainings to assist with these efforts. More detailed descriptions are available in the *Training* section of this report. The regional environmental education campaign, [askHRgreen.org](http://askHRgreen.org), conducted stormwater outreach campaigns for pet waste pickup, proper lawn maintenance, and reduction of fats, oils, and grease.

## **INFORMATION EXCHANGE**

The cornerstone of the Regional Stormwater Program continues to be the exchange of information. This is accomplished through regular monthly meetings to address topics of regional importance, as well as crosscutting issues that affect local stormwater, planning, public works and public utilities staff. In addition, various agencies and organizations utilize this regional forum to engage and inform local governments, as well as to gather feedback.

### ***Monthly Meetings***

The seventeen communities participate in the HRPDC Regional Stormwater Program and their staffs meet regularly, usually twice a month. The Stormwater Workgroup meetings provide an opportunity for local stormwater managers to exchange information about successful program activities, utility structures and policies, and technical challenges. The HRPDC Regional Environmental Committee meetings include local stormwater and planning staff plus cooperating agencies such as the DEQ, the Virginia Department of Forestry (VDOF), the Virginia Department of Transportation (VDOT), the Hampton Roads Sanitation District (HRSD), the Port of Virginia, and local nonprofit organizations.

### ***State and Federal Agency Program Briefings***

Representatives of state and federal agencies frequently brief the Committee on developing issues, regulatory guidance and technical programs. During the year, the Committee was briefed by representatives of the DCR on state park master planning and the Conserve Virginia initiative, representatives of the DEQ on the Coastal Zone Management Program and brownfields, and representatives of the VDOF on urban forestry and resilience programs.

### ***Regional Chesapeake Bay Preservation Act (CBPA) Workgroup***

Fifteen of the seventeen member localities implement CBPA programs, many of them since 1990. DEQ has completed compliance reviews of the region's local programs every five years since they were initiated. The Workgroup serves an advisory role to the Regional Environmental Committee.

The Regional CBPA Workgroup met quarterly during FY2020, holding meetings in July, October, January, and April. The topics of discussion included sharing best practices for Water Quality Impact Assessments and exception requests among localities, new legislation, the Secretary of Natural Resource's Working Group, outreach ideas, and training designed for Board members. One of the goals for the Workgroup is to facilitate a more communicative relationship with the DEQ. Ms. Amber Foster with the DEQ is the new Bay Act liaison for Hampton Roads, and she was able to attend the October meeting to meet local staff.

### ***Regional Water Quality Technical Workgroup***

The objectives of the Water Quality Technical Workgroup are to discuss technical aspects of restoration projects, discuss research and development of stormwater management strategies, help set regional priorities for approval of BMPs for the Bay TMDL, and develop research priorities for filling data gaps. Meetings are open to the public. The Workgroup serves an advisory role to the Regional Environmental Committee.

In FY 2020, meetings were held in October, December, and March. HRPDC staff hosted presenters from RES, the Chesapeake Bay Foundation, Virginia Tech, the Elizabeth River Project, and the DEQ over the course of the year. The featured topics included nutrient banking, oyster BMPs, the role of trees in stormwater management, ditch retrofits, and stream restoration.

## PUBLIC EDUCATION

### ***askHRgreen.org***

The HR STORM committee, consisting of local stormwater education/public information staff, was established in 1997 to support development and operation of the stormwater education program. Beginning in FY 2011, the HRPDC environmental education programs were combined into a single public awareness program and central resource for environmental education in Hampton Roads known as askHRgreen.org.

The stormwater education subcommittee of askHRgreen.org continues to meet on a monthly basis to develop strategies to fulfill the outreach requirements of the Phase II MS4 General Permit and many of the outreach objectives of the individual Phase I MS4 permits. During FY 2020, the subcommittee took on a variety of activities, including outreach to local car wash businesses and a new lawn care paid media campaign. The activities conducted through the askHRgreen.org campaign for the year are summarized in the askHRgreen.org Annual Report.

## TRAINING

Since 2004, HRPDC staff has worked with the MS4 permittees to develop and facilitate stormwater and resiliency training programs for local government staff. The table below provides a summary of the FY 2020 programs.

Training Topic	Date
Stormwater Practice Design, Installation, and Maintenance (Webcast)	9/18/19
Monitoring for Stream Restoration and Green Infrastructure (Webcast)	10/23/19
The Salinization of Our Watersheds (Webcast)	11/20/19
Regional Water Issues (Webcast)	12/18/19
Hampton Roads Stormwater and Erosion Control Workshop for Contractors (Chesapeake)	2/7/20
Hampton Roads Stormwater and Erosion Control Workgroup for Contractors (Hampton)	2/20/20
Climate Resilience (Webcast)	3/18/20
TMDL Planning and Implementation (Webcast)	4/29/20
Small – Scale BMPs (Webcast)	5/20/20

### ***Webcast Subscription***

During FY 2020, the Regional Stormwater Workgroup purchased a series of webcasts from the Center for Watershed Protection (CWP). HRPDC hosted the webcasts so that one registration could be shared. HRPDC staff prepared brief summaries of the webcasts and shared the resources provided by CWP with Workgroup members. After the COVID-19 safe-at-home directive, CWP permitted subscribers to share the log-in information with up to 20 colleagues, recognizing that many subscribers typically view the webcasts in groups.

### ***Online Training Resources***

Due to concerns associated with COVID-19, several organizations shifted their training delivery methods from in-person workshops to webinars. HRPDC staff began compiling information about these resources in one place to help Regional Stormwater Workgroup members take advantage of the opportunities. Each week from April through June 2020, HRPDC staff distributed a complete list of online training events that included the provider, the schedule, the cost, and the registration links.

### ***Hampton Roads Stormwater and Erosion Control Workshop for Contractors***

The HRPDC partnered with the Tidewater Regional Office (TRO) of the DEQ to offer workshops for contractors covering erosion and sediment control practices, the 2019 Construction General Permit, and the state requirements for stormwater pollution prevention plan inspections.

The presenters included Mr. Noah Hill with TRO, Ms. Laura Nusz with the City of Newport News, Mr. David Mergen with the City of Chesapeake, and Mr. Seamus McCarthy and Mr. Odell Glenn, both from the City of Norfolk. The first workshop was held on Friday, February 7, 2020 in the Regional Boardroom at the HRPDC offices in Chesapeake, and the second was held on Thursday, February 20, 2020 at Sandy Bottom Nature Park in the City of Hampton. Combined, the workshops were attended by 82 contractors, 51 local government staff, 2 utility representatives, and 1 non-profit representative. The feedback was very positive, with several participants indicating that they had found the workshop to be informative and valuable.

## **POLICY MONITORING**

This element of the program involves monitoring state and federal legislative and regulatory activities that may impact local stormwater management programs. HRPDC staff in cooperation with the Committee develops consensus positions for consideration by the Commission and local governments. The level of effort devoted to this element has increased significantly over the years. During FY 2019, the regional emphasis was on the Erosion and Stormwater Management consolidated regulations, non-point nutrient trading regulations, revisions to the Chesapeake Bay Action Plan guidance, proprietary BMPs, and Virginia's Phase III Watershed Implementation Plan. For each issue, HRPDC staff provided updates to the Regional Stormwater Workgroup or the Regional Environmental Committee, collected input, and submitted comments on behalf of the Region. If a state stakeholder group was assembled for a particular issue, then the Region nominated a representative to serve on behalf of the localities.



### ***Virginia Erosion and Stormwater Management Program Regulations***

The DEQ convened a Regulatory Advisory Panel (RAP) to develop regulations in response to the 2016 consolidated law, the Virginia Erosion and Stormwater Management Act (VESMA). The intention is to develop a combined regulation that is easier to follow but does not change the technical requirements of the existing Erosion and Sediment Control and Stormwater Management regulations. HRPDC staff serves on the RAP, which met five times between June 2019 and December 2019. After the December meeting, the DEQ postponed future meetings to the Spring of 2020. They had intended to provide a comprehensive draft of the consolidated regulation for RAP members to review prior to the next meeting. However, the process has been delayed by the COVID-19 stay-at-home directive. The date of the next meeting has not been established, and the RAP has yet to receive a draft of the regulation. Before COVID-19, the DEQ had hoped to take the regulation to the State Water Control Board in late 2020. The extent of the delay in schedule is unclear. HRPDC staff will continue to participate in the RAP and provide regular updates.

### ***Virginia Nutrient Trading Regulations***

In 2012, the Virginia General Assembly passed legislation requiring the State Water Control Board to adopt regulations for the certification of nonpoint source nutrient credits. Nonpoint credits include credits generated from agricultural and urban stormwater BMPs, management of animal feeding operations, land use conversion, stream or wetlands restoration, shellfish aquaculture, and other established or innovative methods of nutrient control or removal. Virginia's current trading program involves exchanges between point sources and from point to nonpoint sources. This regulation is another step towards a successful trading program because it will make additional nonpoint source nutrient credits available for point or nonpoint source trades. This expanded trading program is part of the overall goal of meeting the reductions assigned by the Chesapeake Bay TMDL.

The regulation will establish the process for the certification of nonpoint source nitrogen and phosphorus nutrient credits and assure the generation of the credits. The regulation includes application procedures, baseline requirements, credit calculation procedures, release and registration of credits, compliance and reporting requirements for nutrient credit-generating entities, enforcement requirements, application fees, and financial assurance requirements.

The regulation has been in development for several years. From FY 2013 to FY 2017, HRPDC staff has served on the Regulatory Advisory Panel established to assist the DEQ in developing the certification regulations. The DEQ proposed the regulations for public comment in the Virginia Registrar on December 29, 2014. The HRPDC submitted comments to the DEQ in March 2015 that: 1) supported the definition of management area, 2) requested a public hearing be held for nutrient certification requests, 3) asked for clarification of credits purchased within MS4s by private parties, and 4) suggested revisions to ensure that the regulations are protective of local water quality.

In FY 2016, the DEQ reconvened the Regulatory Advisory Panel to discuss “Innovative Practices, Perpetual Nutrient Credits/Permanence, Stream Restoration/Mitigation Banking, and Term Nutrient Credits” based on the number of comments received during the public comment period.

In FY 2017, the Regulatory Advisory Panel met in April to discuss a list of issues that failed to reach consensus. It was anticipated that a revised regulation would go out for public comment later that year.

The Governor approved the draft regulation, and it was published in the Virginia Register on April 15, 2019 for comment. The HRPDC submitted comments that: 1) requested clarification that baseline conditions must be met within the MS4 service area before credits could be generated, 2) requested flexibility for VSMP Authorities to require credits be secured upstream of the discharge to protect local water quality, and 3) supported requiring credit applicants to verify that their projects comply with local ordinances.

The public comment period ended on May 30, 2019. The new regulations were published in the Virginia Register on July 6, 2020 and are anticipated to have an effective date of September 1, 2020. However, the regulation will not be complete. The section detailing the impact of local water impairments on credit exchanges was deferred to a later date. It is anticipated that the new section (9VAC25-900-901) will be published prior to September 1, 2020.

#### ***Chesapeake Bay TMDL Action Plan Guidance***

In accordance with the Administrative Process Act revisions in 2018, the DEQ is required to publish draft guidance in the Virginia Register to initiate a formal 30-day public comment period prior to finalization. If any public commenters claim that the guidance document should instead be regulation, the effective date of the guidance is automatically extended for at least 30 days. In order to avoid future delays, the DEQ provided a draft of the Chesapeake Bay TMDL Action Plan guidance to a small group of stakeholders for a fatal flaw review. Before publishing the draft in the Virginia Register, the DEQ wanted to determine whether it would be met with claims that it was not actually guidance. HRPDC, VAMSA, the Northern Virginia Regional Commission, and several MS4 permittees were invited as part of the small stakeholder group. Though the stakeholders did not advocate for making the guidance regulatory, there were several concerns that were raised, including: 1) credit guarantees from the first permit cycle, 2) crediting for septic system conversions to sanitary, 3) street sweeping crediting, and 4) baseline requirements for retrofit projects beyond the MS4 service area. The HRPDC submitted written comments explaining these concerns to the DEQ. It was anticipated that the revised guidance would be published in the Virginia Register in June 2020 so that it could be finalized by the end of July 2020; however, the schedule has been delayed.

#### ***Proprietary BMPs for Stormwater Compliance***

The post-construction water quality requirements require approval from DEQ for use of proprietary BMPs in Virginia. The Stormwater BMP Clearinghouse Committee was established

in order to provide guidance to the DEQ on BMP listing criteria, Clearinghouse website content, and database design. Regional input centered on defining the proposed role of the Clearinghouse in approving proprietary BMP pollutant removal efficiencies.

At the end of FY 2014, the DEQ issued interim guidance that describes a process for approving these proprietary BMPs and assigning pollutant removal credits: “Interim Use of Stormwater Manufactured Treatment Devices (MTDs) to meet the New Virginia Stormwater Management Program (VSMP) Technical Criteria, Part IIB Water Quality Design Requirements.” In FY 2015, the Clearinghouse Committee focused on the approval process for MTDs and discussed how and when the guidance should be updated or replaced with regulations. HRPDC staff has been involved with a cooperative effort to request that DEQ add sizing criteria to the guidance. In FY 2016, DEQ began the process of revising the guidance and updating the BMP Clearinghouse to include sizing for MTDs.

During FY 2019, DEQ developed new draft guidance on evaluating MTDs. The Clearinghouse Committee members were asked to review it and provide comments. The regional concerns included: 1) reciprocity and the applicability to Coastal Plain Virginia, 2) MTDs currently listed on the BMP Clearinghouse, 3) the transition period from the existing guidance to a new one, 4) the removal efficiency cap for filtering devices, and 5) the removal efficiencies for hydrodynamic separators.

The BMP Clearinghouse Committee met once during FY 2020, on August 15, 2019 to discuss revisions to the new draft guidance. DEQ proposed a path forward, which includes allowing manufacturers to submit certifications from other states programs to be approved at higher removal efficiencies. To date, DEQ has not provided a subsequent version of the guidance. House Bill 882, which passed during the 2020 General Assembly session, established new expectations for MTDs to remain listed on the Clearinghouse. It is not yet clear how the bill will be implemented; however, HRPDC staff continues to follow the process as it develops.

### ***Virginia’s Phase III Watershed Implementation Plan for the Chesapeake Bay TMDL***

The EPA established the Chesapeake Bay TMDL on December 29, 2010 that included a Phase I Watershed Implementation Plan (WIP) developed by Virginia that outlined the statewide strategies that would be implemented by each source sector to achieve TMDL compliance. In March 2012, Virginia submitted its final Phase II WIP to EPA that outlined the management actions that will be implemented by local governments. The HRPDC participated in both efforts on behalf of the local governments and submitted regional input for the Phase II WIP entitled, *Hampton Roads Regional Planning Framework, Scenario, and Strategies*.

In FY 2015, Virginia began the development of the Phase III WIP with the establishment of the Chesapeake Bay Stakeholder Advisory Group. HRPDC staff continues to participate in the Stakeholder Advisory Group and attended the meetings held in FY 2020 in August, December, and June.

As part of the state's efforts to develop the Phase III WIP, DEQ staff led outreach meetings across the state. HRPDC hosted the outreach meeting for Hampton Roads on July 17, 2018. DEQ staff reviewed the progress Virginia has made so far in reaching the goals of the TMDL, discussed the schedule for the development of the Phase III WIP, and explained the role of localities.

In FY 2019, DEQ contracted with the Planning Districts in the Bay watershed to develop strategies for reducing nitrogen and phosphorus loads (known as local area planning goals) in the unregulated developed, natural, and septic sectors. As part of this effort, HRPDC staff coordinated four stakeholder meetings from August through December 2018 to gather data, share best practices, discuss potential management strategies, and propose policy changes for obtaining nutrient reductions. Each meeting was attended by approximately 35 representatives of local governments, consultants, nonprofit organizations, HRSD, DEQ, VDOT, VDH, local health districts, and the Soil Water Conservation Districts. As part of the data gathering effort, regional GIS layers relevant to the success of the Phase III WIP were made available on HRGEO, HRPDC's online regional GIS data portal. The HRPDC submitted a BMP input deck and a table of programmatic actions as part of the contract with DEQ. The regional BMP input deck included the numbers of acres of BMPs such as shoreline management, tree planting, septic pump-out, bioretention basins, dry ponds, etc. that the Hampton Roads localities proposed to implement before 2025. The programmatic actions represent a list of recommendations that would facilitate BMP implementation or help the Commonwealth achieve local area planning goals. Many actions addressed deficiencies in state funding, technical assistance, and reporting gaps. HRPDC staff were invited to present the region's Phase III WIP efforts at the VA Water Environment Association Spring Seminar in April 2019.

The DEQ released the draft Phase III WIP in April 2019 and initiated a formal public comment period. The HRPDC supports several of the initiatives that were included in the WIP, such as Virginia's commitment to three full five-year MS4 permit cycles, the development of a State Lands WIP, and the pursuit of adequate funding for SLAF. The region submitted a formal comment letter with several recommendations, including: 1) formalize a State Lands WIP in the Chesapeake Bay modeling tool, CAST, 2) expand access to the Virginia Conservation Assistance Program to all residents in the Bay watershed, 3) enhance BMP reporting, 4) explain why additional nutrient reduction targets were assigned to the James River, when those reductions are 1/6 as effective as pounds reduced in other basins, 5) prioritize projects in the James River for Water Quality Improvement Funds (WQIF), 6) reduce the goals for tree canopy expansion to a realistic target, 7) align state funding priorities with Phase III WIP goals, and 8) revise the numeric reductions on climate change impacts and shift to an adaptive management approach.

The EPA reviewed the draft Phase III WIP concurrently and identified both strengths and potential enhancements. Virginia's extensive engagement at the local level was listed as the primary strength, while providing more details on funding needs was the most notable recommended improvement.

The Commonwealth released the final Phase III WIP in August 2019. The Final version included new state initiatives, such as advanced oyster restoration efforts, increased conservation efforts, and re-evaluating the MS4 TMDL Action Plan guidance.

### ***Water Quality Management Planning Regulation***

The Water Quality Management Planning Regulation sets effluent limits for wastewater treatment plants, which are routinely reevaluated. The DEQ established a RAP to evaluate: 1) the distribution of waste load allocations (WLAs) for industrial and municipal dischargers, 2) any changes in WLAs that must be made as a result of the James River chlorophyll *a* study, and 3) the potential for floating WLAs for James River wastewater treatment plants. DEQ has determined that no changes will need to be made as a result of the new chlorophyll *a* criteria. DEQ remains supportive of floating WLAs, despite significant pushback from the VA Municipal Wastewater Association (VAMWA). In the Phase III Watershed Implementation Plan (WIP), Virginia laid out a plan to acquire additional reductions from the wastewater sector in the James River to trade with the Potomac River. VAMWA maintains that the trades, at a ratio of 6:1, are not cost effective. There are also concerns that in addition to investing in the SWIFT project, which will result in significant long term water quality improvements, HRSD may also be required to purchase credits to meet short term reductions. Throughout these discussions between DEQ and HRSD, the credits available to MS4s have been protected. The DEQ anticipates sending the draft regulation to the State Water Control Board in September 2020.

## **REGIONAL STUDIES**

### ***Water Quality Monitoring Study***

In FY 2014, the HRPDC and the Phase I MS4 localities partnered with the USGS and the HRSD to create the Hampton Roads Regional Water Quality Monitoring Program (RWQMP). The purpose of the study is to characterize the sediment and nutrient loadings from the major urban land-uses in the Hampton Roads region. The data collected during the first three to five years will serve as a baseline for nutrient and sediment loads from the MS4s prior to implementation of BMPs in the studied watersheds to comply with the Chesapeake Bay TMDL. The measured sediment and nutrient loads will be compared to the loading rates in the Chesapeake Bay Watershed Model and used to improve the accuracy of the model in the Coastal Plain. In FY 2015, the locations of the 12 stations (2 per Phase I locality) were selected, and seven stations were installed. In FY 2016, three additional stations were installed. In FY 2017, the remaining two stations were brought online. Since then, all twelve stations continued to collect storm event samples, which are analyzed for nutrients and sediments. The stations continuously monitor flow, turbidity, temperature, and conductivity. Additional information on the project objectives, site locations, and data collected can be viewed here: <http://va.water.usgs.gov/HRstormwater/index.html>.

The RWQMP was incorporated into the Phase I MS4 permits. HRPDC staff develops an Annual Report that includes the locations of monitoring stations, a summary of available data, and an interpretation of the data to include in the Phase I MS4 Annual Reports. The report is based on

the annual update presented to the Regional Stormwater Workgroup by Mr. Aaron Porter (USGS). Once five years of data has been collected and analyzed from all twelve stations, Mr. Porter will begin to compare the pollutant loadings to those in the Chesapeake Bay model.

#### ***Stormwater Program Matrix***

A comprehensive stormwater program matrix, including Phase I and Phase II MS4 permittees, was developed in FY 2000 to address both utility and programmatic issues. The matrix includes the rate structures, the type of bill, the frequency of billing, the number of utility customers, and program contact information. HRPDC staff coordinates with local government stormwater program staff to update the information in the matrix annually.

#### ***Stormwater Retrofit Projects in the Region***

A master regional list of stormwater retrofits that have been completed, are under construction, or are in design was developed in FY 2019. The list includes construction costs, total costs, BMP type, acres treated, pollutant removal, etc. HRPDC staff will coordinate with local government staff to update the information regularly.

#### ***Local TMDL and Implementation Plan Development***

The state has developed a substantial number of TMDL Studies and TMDL Implementation Plans. This work follows the classification of the waters by the state as meeting or failing to meet water quality standards. Water bodies that fail to meet water quality standards are classified as “impaired,” triggering the requirement to prepare the TMDL study. HRPDC staff has coordinated regional involvement in the “impaired waters” listing and TMDL development process. This has entailed providing opportunities through the Regional Environmental Committee for education of local government staff on the TMDL process, response to the development of TMDLs themselves, and participation in the development of implementation plans.

To assist the region’s localities in addressing this requirement and ensuring that Implementation Plans are feasible, HRPDC staff is working with the DEQ through a cooperative regional partnership to coordinate the TMDL study process with the localities and to develop the required Implementation Plans. In FY 2014, the HRPDC partnered with the DEQ, Hampton Roads localities, and the HRSD to develop a study plan to collect stormwater samples from the Elizabeth River watershed and analyze them for polychlorinated biphenyl (PCB) concentration in order to support the development of the Lower James and Elizabeth River PCB TMDL. Stations in Chesapeake, Norfolk, Portsmouth, and Virginia Beach were selected because they met the criteria for representative land uses and watersheds where PCBs could be monitored. In FY 2015, water samples were collected at these stations by the HRSD and sent to the DEQ selected laboratory for PCB analysis. The MS4 localities in Hampton Roads funded the data collection and the DEQ paid for the analysis. The PCB TMDL for the Lower James and Elizabeth River was expected to be developed in FY 2017; however, the DEQ experienced a number of staffing changes and other delays. It is expected sometime during FY 2021.



### ***HRSD Bacteria Source Tracking***

HRSD began a pathogen program to conduct bacteria source tracking in June 2015. The program was designed as a way to partner with local governments to focus source identification efforts. HRSD is providing sampling and analysis services while the local governments are providing staff time for the investigations. Several localities have taken advantage of the program including Chesapeake, Hampton, Newport News, Norfolk, Virginia Beach, and Suffolk. Mr. Danny Barker, HRSD, provided an update on the source tracking program to the Regional Environmental Committee in August 2019.

### **TECHNICAL ASSISTANCE**

The HRPDC continues to serve as a clearinghouse for technical assistance to the localities, as well as a point of contact in arranging short-term assistance from one locality to another. The HRPDC Committee structure also provides a forum for state and federal regulatory agency staff to meet with the region's localities to discuss evolving stormwater management regulations and other emerging regulatory issues. In addition, HRPDC staff provides technical information and advice to all of the participating localities on a wide variety of issues upon request. In FY 2020, technical assistance to localities was focused on disseminating information related to implementation of and compliance with the Chesapeake Bay TMDL, providing training resources for locality stormwater staff, and evaluating the challenges of interpreting and implementing the local stormwater programs.

### **MEMORANDUM OF AGREEMENT**

The Regional Stormwater Management Program was established in 1996 as a formal program of the Hampton Roads Planning District Commission with support and participation from the seventeen member local governments. A MOA was created that outlines the basic regulatory and programmatic premises for the cooperative program, incorporating the Regional Program Goals, described earlier in this report. The MOA establishes a division of program responsibilities among the HRPDC and the participating localities, addresses questions of legal liability for program implementation, and includes other general provisions. The MOA is reauthorized by the signatories every five years and was most recently renewed in 2018.

### **PERMIT ADMINISTRATION AND REPORTING SYSTEM (PARS)**

In an effort to streamline reporting and capture data more effectively for local governments, the permitted localities pooled resources to develop the Permit Administration and Reporting System, or PARS. The region contracted with URS Corporation to develop a web-based data tracking and reporting system. The system allows local governments to catalog development sites and their associated BMPs. The system also enables localities to capture inspection information, catalog stormwater outfalls, document illicit discharge investigations and record public education information. The Regional Stormwater Workgroup agreed to retire PARS on June 30, 2016 for all users except Chesapeake, James City County, Norfolk, Suffolk, and Williamsburg as it no longer met reporting and tracking needs. These five localities agreed to

continue to support PARS through December 2016. Norfolk and Chesapeake continue to support the database into FY 2021 while alternative systems are under development in those localities.

## **RELATED PROGRAMS AND PROJECTS**

In various combinations, the eleven MS4 communities, as well as their non-permitted counterpart communities, and HRPDC staff participate in a wide variety of related programs. These programs are noted here because of their relationship with stormwater management.

### ***Chesapeake Bay Program Participation***

The CBP is a regional partnership that has led and directed the restoration of the Chesapeake Bay since 1983. CBP partners include federal and state agencies, local governments, non-profit organizations and academic institutions. Partners work together through the CBP's goal teams, workgroups and committees to collaborate, share information, and set goals.

Since the development of the Chesapeake Bay TMDL in December 2010, the Hampton Roads Region has devoted considerable attention to the research, developments, and decisions ongoing within the CBP. HRPDC and locality staff have participated in the deliberations of many CBP committees and work groups dealing with urban stormwater, land development, watershed planning, land use development, modeling and local government's role in the Bay Program. HRPDC staff are local government representatives of the Urban Stormwater Workgroup and the Climate Resilience Workgroup, and co-chair of the Land Use Workgroup. During FY20, staff has advocated for: 1) better growth projections, 2) using 2035 as a climate change planning target rather than 2025, and 3) research goals related to the intensity-duration-frequency (IDF) curves.

Staff also follow the activities of the Watershed Technical Workgroup and the Water Quality Goal Implementation Team. Through the Urban Stormwater Workgroup, HRPDC staff are informing the Bay Partnership of the resilience work being done in the region, sharing findings of analyses and policies, and advocating for research on the co-benefits of BMPs for water quality and flooding concerns. HRPDC staff also serves on Virginia's WIP III Stakeholder Advisory Group (SAG) and participated in the development of the James River chlorophyll-a study.

### ***External Training Committee***

The Office of Training Services of DEQ established a new Committee, the External Training Committee, to serve the training needs of Erosion and Sediment Control and Stormwater certified professionals. The Committee was tasked to identify priority training topics and ensure training topics are prioritized, efficiently developed, and meet the needs of certified professionals. Representatives from DEQ, the consultant community, and local governments, including the City of Norfolk, Gloucester County, James City County, and the HRPDC, make up the Committee.



Using a survey tool, the Committee developed a preliminary list of priority training topics for Inspectors, Plan Reviewers, and Program Administrators. The topics included energy balance examples, typical design site constraints, effective enforcement measures, and new ESC practices. The Committee reviewed these topics at the May 19, 2020. The next steps will be to identify resources, including personnel and materials, to aid in course development. The DEQ suggested breaking the Committee into Workgroups to work on the highest priority training topics. HRPDC staff will continue to provide updates as the work of the Committee progresses.

### ***Trading with HRSD***

HRSD, HRPDC staff, and the MS4 permittees collaborated to develop a regional template for MOAs to establish the framework for trading stormwater pollutant reduction credits. Individual MOAs with each of the eleven MS4 permittees were signed in 2017.

Currently HRSD treatment plants operate well below design flows, as those were established to ensure capacity to support regional population projections in 2040 and beyond. Annual average flows in 2015 were approximately 60% of design flows. As a result of plant flows well below design flows in combination with significant investment in nutrient removal technologies, HRSD currently discharges nutrients and sediment significantly below permitted limits and is projected to do so for the foreseeable future. The difference between permitted mass load limits and current performance provides ample capacity to absorb load reductions required from stormwater dischargers in Hampton Roads through at least 2036.

HRSD is developing the Sustainable Water Initiative for Tomorrow (SWIFT) project, their multi-year initiative that will take treated wastewater, purify it to drinking water standards, and then inject it into the Potomac Aquifer. In addition to replenishing the water in the aquifer, the SWIFT project will significantly reduce the volume of treated wastewater reaching the James, York, and Elizabeth Rivers. The project will generate enough permanent nutrient and sediment credits to meet almost all of the regional urban stormwater waste load allocations in the Chesapeake Bay TMDL. Mr. Ted Henifin (General Manager for HRSD) has given several presentations on the project at the Regional Environmental Committee and Regional Stormwater Workgroup meetings.

Trading with HRSD, first using the capacity credits and then using the permanent credits from SWIFT, provides a more cost-effective opportunity for MS4 permittees to meet the waste load allocations of the Chesapeake Bay TMDL.

### ***DEQ Contract with Planning District Commissions in the Bay Watershed***

In partnership with the other Virginia planning districts in the Chesapeake Bay watershed, HRPDC continued the contract agreement with DEQ to provide support for implementation efforts related to Virginia's Chesapeake Bay TMDL Phase III Watershed Implementation Plan (WIP). This third contract primarily focuses on efforts to evaluate the Chesapeake Bay Preservation Act (CBPA) in a changing climate and promote the program to the public. While

the CBPA program has been implemented for years, certain aspects of the regulations may need to be re-evaluated or updated as shoreline management protocols are adjusted to account for increasing sea level rise and intensity and duration of storms. Work is primarily conducted in conjunction with the CBPA Workgroup and input from the Regional Stormwater Management Workgroup is also incorporated. In addition to these efforts, this contract also supports continued outreach to localities regarding implementation of BMPs in the unregulated urban and natural sectors. During FY 2020, staff have continued to research opportunities with the Virginia Conservation Assistance Program (VCAP) and seek ways in which localities outside of Soil, Water, and Conservation Districts (SWCDs) could take part.

### ***Lower James River and York River Roundtables***

During FY 20, staff have participated in meetings of the Lower James River and York River Roundtables. Discussions for the Lower James River Roundtable have centered around outreach and education for BMP implementation for homeowners. Hampton Roads has a robust environmental education campaign through askHRGreen and staff was able to promote the campaign to representatives throughout the lower James River watershed. The York River Roundtable has been focused on funding opportunities and initiatives for shoreline management projects in the York River. Staff have been able to connect local governments within the watershed to potential funding opportunities offered by the National Oceanic and Atmospheric Administration (NOAA).

### ***Elizabeth River Project's Initiatives***

HRPDC staff have been participating on efforts to restore the Eastern Branch of the Elizabeth River. Several meetings were held with representatives from the Elizabeth River Project (ERP), the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach, HRSD, HRPDC, Norfolk State University, the US Navy, the Tidewater Regional Office of the DEQ, VA Department of Health, Chesapeake Bay Foundation, and consulting agencies as part of the Eastern Branch Implementation Team. This group works towards identifying projects for implementation along the Eastern Branch of the Elizabeth River. The primary focus in FY20 was to address bacteria impairments by understanding sources through HRSD's bacteria source tracking program and through educational programs and events like River Star Homes and River Fest. Shoreline restoration BMPs also were implemented in several localities along the Eastern Branch to improve water quality and habitat in the region.

The ERP is also working on an update to their water quality scorecard and Watershed Action Plan. HRPDC staff have been advising the technical committee on how to assess scores and trends for nutrients in the Elizabeth River using data collected by DEQ. The scorecard will evaluate a variety of parameters to determine the health of the River and provide information to begin the next iteration of the Watershed Action Plan. Through these efforts, HRPDC staff is assisting ERP staff in identify funding opportunities for implementation efforts throughout the Elizabeth River watershed.

## CONCLUSION

Through the Hampton Roads Planning District Commission, the seventeen localities of Hampton Roads have established a comprehensive Regional Stormwater Management Program. This program provides technical assistance, coordination, comprehensive technical studies and policy analyses and stormwater education. The Regional Stormwater Management Program enables the region's localities to participate actively and effectively in state and federal regulatory matters. It has enhanced the ability of the eleven localities with VPDES Permits for their Municipal Separate Storm Sewer Systems to comply with permit requirements.

The Regional Stormwater Management Program provides a mechanism through which the strengths of the seventeen local stormwater programs can be mutually supportive. It allows for cost-effective compliance with permit requirements, resolution of citizen concerns with stormwater drainage and water quality matters, promotes regional consistency, and achievement of improved environmental quality throughout the Hampton Roads Region.